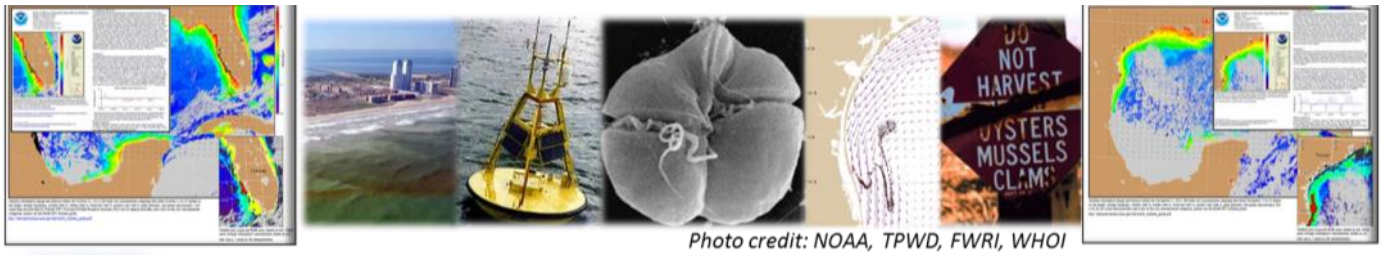

Photo credit: NOAA, TPWD, FWRI, WHOI

Issue 9 September 2014

NOAA HAB-OFS Newsletter

Welcome to the NOAA HAB-OFS Quarterly Newsletter. We are always happy to hear from you so please send your topic suggestions, questions, comments and feedback to hab@noaa.gov.

In this issue:

HAB-OFS Team Hosts Stakeholder Meetings Ahead of Beach Hazard Statement Expansion

On February 4, 2013, the Harmful Algal Bloom Operational Forecast System (HAB-OFS) team began disseminating forecasts of high respiratory irritation associated with *Karenia brevis* through the National Weather Service (NWS) Beach Hazards Statements. The Weather Forecast Office (WFO) Tampa Bay was the first to include these HAB alerts in the Beach Hazards Statements. Following the success of this product, the HAB-OFS is expanding the coverage of the Beach Hazards Statements to the WFOs Miami and Key West effective October 2014 which will increase HAB Beach Hazards Statement coverage to include Collier, Palm Beach, Broward, Miami-Dade and Monroe counties, including the Florida Keys. A map of each WFO's area of responsibility is shown in Figure 1 and can be viewed here.

Ahead of this expansion, NOAA has been working to incorporate lessons learned from discussions with partners and stakeholders to make the alerts more useful and easier to interpret. In August, the HAB-OFS Product Coordinator, Karen Kavanaugh, and NOAA's Ecological Forecasting Roadmap Portfolio Manager, Allison Allen, traveled to Florida and hosted two stakeholder meetings, in collaboration with the NOAA's National Weather Service. The meetings served to provide an overview of the current suite of HAB-OFS products and address questions and concerns regarding the planned Beach Hazards Statement expansion. The meetings in both Naples and Marathon, FL were well attended by representatives of local, county, state, and federal agencies, academia, and tourism organizations. The meetings were productive and filled with excellent discussions about the benefits and limitations of the Beach Hazards Statements. The representatives provided many suggestions that were aimed at improving procedures and products in the future. Ultimately, the feedback received has emphasized that there is a need for easy-to-understand updates about harmful algal bloom events such as *K. brevis*. With the expansion of the HAB Beach Hazards Statements, people in coastal communities from Levy to Palm Beach counties and the Florida Keys will have easier access to forecasts of high respiratory irritation associated with *K. brevis*. These alerts will include resources that people can use to find unaffected beaches nearby.

Figure 1. *Weather Forecast Office area of responsibility.*

HAB-OFS Bulletin Dissemination and Respiratory Irritation Forecast FAQs

When are potential respiratory irritation impacts forecast?

Levels of potential respiratory irritation are forecast once water samples indicate concentrations of *K. brevis* along the coast (within 1 mile of shore). The forecasts may also be based on the level of respiratory irritation observed at the coast, as long as it is confirmed to be associated with *K. brevis*. To learn more about the respiratory irritation levels, check our FAQs.

(Continued on page 2)

When are the bulletins disseminated twice weekly?
Bulletins are disseminated twice weekly once bloom level concentrations are identified nearshore or alongshore and there is potential for respiratory irritation. While there has been an ongoing bloom from Dixie to Pinellas County since late July, this bloom was present only offshore until September 8, when water samples confirmed bloom concentrations nearshore Levy County. These water samples, in addition to respiratory irritation reported along islands offshore Pinellas County, prompted twice weekly bulletin status. At this point, a conditions update with levels of potential respiratory irritation in the affected regions was released, and the bulletin dissemination schedule was changed to twice weekly. During an active bloom with alongshore bloom concentrations, bulletins are disseminated twice weekly on Mondays and Thursdays (or the day following a federal holiday). During inactive bloom periods or periods when the bloom is located only offshore, bulletins are issued once weekly on Mondays.

Where can I find the respiratory irritation forecasts and bulletins?
Respiratory irritation forecasts are provided in the Conditions Report section of each bulletin and can be found online at www.tidesandcurrents.noaa.gov/hab and on our Facebook page at www.facebook.com/Habredtidewatchnoaagov. Full bulletins are disseminated to subscribers and can be accessed through the HAB-OFS Bulletin Archives. This webpage also includes bulletin subscription information.

Data Provider Spotlight on Mote Marine Laboratory

Local and regional data providers are critical to the success of HAB-OFS, providing the data necessary to develop accurate and timely forecasts of bloom movement and respiratory irritation. In this newsletter, we highlight the efforts of Mote Marine Laboratory.

Who: Mote Marine Laboratory

Coverage: From the Florida Panhandle to the Florida Keys

History: Opening in 1955 as the Cape Haze Marine Laboratory, Mote Marine Laboratory now maintains research stations in Sarasota, Charlotte Harbor, and the Florida Keys.

Data Highlights: Mote Marine Laboratory is a major data contributor and partner to the NOAA HAB-OFS and provides water samples and real-time observations used to create the weekly HAB-OFS bulletins.

- Beach Conditions Reporting System: A comprehensive network of lifeguard stations trained to identify respiratory irritation caused by red tide in 9 counties along Florida's Gulf coast from the Panhandle to Bonita Beach. HAB-OFS uses this information to infer the location and potential respiratory impacts of a bloom when creating weekly forecasts. To see real-time updates of a beach near you, visit the Beach Conditions Reporting System website at http://coolcloud.mote.org/bcrs/.
- Slocum Gliders: Autonomously roam the Gulf 24/7 for several weeks at a time. The gliders use the Optical Phytoplankton Discriminator which exploits optical absorbance characteristics of algae to detect *Karenia brevis* and several other algae species.
- Research Boats: When a bloom is detected through routine monitoring or satellite imagery, several advanced research boats give MML the capability to sample offshore Florida.

More Props: Mote Marine Laboratory isn't just a Red Tide data provider, they also conduct research, and began as a center for shark research! The Sarasota facility boasts an impressive program researching bloom dynamics, mitigation strategies, and toxicology of *K. brevis*.

The dedication of research institutions such as Mote Marine Laboratory is instrumental in providing timely and accurate forecasts. As the NOAA HAB-OFS team monitors the Gulf throughout this year's bloom season, we can thank the partnership with Mote Marine Laboratory for providing essential field observations and expertise required to guard the coast of Florida.

We encourage you to visit the Mote Marine Laboratory website at http://mote.org/.

Many Thanks to our Partners and Data Providers
http://tidesandcurrents.noaa.gov/hab/contributors.html

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